Inorganic Ions in Drinking Water by Ion Chromatography EPA 300.1 Revision 1.0

Facility Name:_____VELAP ID_____

Assessor Name:_____Analyst Name:_____Inspection Date_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____ Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____					
Are sample bottles used for chlorite analysis opaque?	8.2.1				
Are samples analyzed within holding times? (NO_2, NO_3, and orthophosphate within 48 hours, chlorite 14 days, and all others 28 days.)	8.3				
For bromate, bromide, chlorate, and chlorite, is EDA preservation solution added to samples in a ratio of 0.5 mL to 1 L of sample? Final concentration is 50 mg/L in samples.	8.5				
Is a surrogate solution containing dichloroacetate (DCA) prepared using dichloroacetic acid, potassium salt and added to samples?	7.5				
For orthophosphate, are samples not held at room temperature for more than 12 cumulative hours?	8.7				
Are quality control samples within ±15% of stated values?	9.2.2				
Are method detection limits established for all analytes?	9.2.3				
Is a laboratory reagent blank analyzed with each batch and determined to be below method detection limits?	9.3.1				
For bromate, chlorate, and chlorite is EDA added to the laboratory reagent blank and the laboratory fortified blank at 50 mg/L?	9.3.1.1, 9.3.2.1				
Is laboratory fortified blank recovery within 75-125% when the concentration range is MRL to 10xMRL, or within 85-115% when concentration range is 10xMRL to highest calibration level?	9.3.2.2				
Notes/Comments:					

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Is the peak gaussian factor determined to be between 0.80 and 1.15?	9.3.3.1				
Does the laboratory retain a historical record of retention times for the surrogate and all the target anions?	9.3.3.2				
Is a laboratory fortified matrix added to a minimum of 10% of samples within a batch?	9.4.1				
Is laboratory fortified matrix recovery between 75-125% or within more stringent limits established from internal performance data?	9.4.1.4				
Is surrogate recovery within 90-115%?	9.4.2.1				
Are duplicates analyzed for at least 10% of the collected samples or one per batch, whichever is greater? Duplicates must be performed on samples with measurable concentrations of the target anions, or on the laboratory fortified matrix if necessary.	9.4.3				
Are duplicate acceptance criteria ±20% for concentration ranges of MRL to 10xMRL or ±10% for concentration ranges of 10xMRL to highest calibration level?	9.4.3.2				
Does the linear calibration range cover the expected concentration range of samples?	10.2				
Are at least three calibration standards used if the linear calibration range is a single order of magnitude?	10.2.2				
Are at least five calibration standards used when the linear calibration range covers two orders of magnitude?	10.2.2				
For bromate, bromide, chlorate, and chlorite, is EDA added to each calibration standard at 50 mg/L?	10.3.1				

Notes/Comments:

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Relevant Aspect of Standards	**Method Reference**	**Y**	**N**	**N/A**	**Comments**
Is a continuing calibration check standard analyzed after every tenth sample and at the end of the analysis?	10.5				
Are initial and continuing calibration checks within 75-125% for concentration ranges of MRL to 10xMRL or 85-115% for concentration ranges of 10xMRL to highest calibration level?	10.5, 10.5.1				
For continuing calibration checks, did the retention times for each analyte stay within ±5% of the expected values?	10.5				
For bromate, bromide, chlorite, and chlorate, is the lowest calibration standard used for the initial calibration verification check?	10.5.2				
For bromate, bromide, chlorite, and chlorate, are continuing calibration check standards varied between a middle calibration level and the highest calibration level?	10.5.3				
Are refrigerated samples allowed to come to room temperature before analysis by warming on the bench for at least 1 hour?	11.3.1				
Are samples filtered with a 0.45 µm particulate filter prior to injection into the instrument?	11.4				
Are only the values that fall between the lowest and highest calibration standards reported? Samples exceeding the highest standard should be diluted and reanalyzed.	12.2				
Notes/Comments:					